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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,800	06/25/2001	Adriaan Retief Swanepoel	0182.00001	6013

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EXAMINER
BALSIS, SHAY L

ART UNIT	PAPER NUMBER
1744	

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Application No. 09/806,800	Applicant(s) SWANEPOEL, ADRIAAN RETIEF	
	Examiner Shay L Balsis	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6, 7* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Arai et al. *"Arai"* (USPN 4807326).

Arai teaches a wiper, which includes an elongate, flexible curved backbone (3). There is a force applying member (2) connected to the center backbone at two spaced apart points (2A, 2B).

The spacing distance, S, between the points is between S_1=0.1*L and S_2=0.35*L where L is the length of the backbone. In the instant case, L & S are measured from the figures and it is determined that L is approximately 132 mm and S is 44.5 mm. After completing the calculations for the spacing distance, the spacing must be between 13.1 and 46.2 mm. Therefore, it is shown that the spacing distance of 44.5 mm falls within this range.

The ratio of the spacing distance between the points and the total length (R=S/L) must be between 0.1 and 0.35. The ratio for Arai's wiper is 0.34 and therefore falls within this range.

The preferred spacing distance S_p between the spaced apart points is about S_p=0.363*L-0.000146*L^2. With Arai's length of 132 mm a preferred spacing of 45.4 mm is calculated. The actual spacing is 44.5 and therefore there is only an error of 0.9 mm between the actual and the preferred spacing. This is considered to be an acceptable amount of error.

The preferred ratio R_p is about R_p=0.363-0.000146*L. Given Arai's length and spacing it is calculated that the preferred ratio is 0.34. That is the exact ratio as calculated above.

The force applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. The backbone has a constant thickness and width along its length. The backbone also has a free form curvature as well as a compound curvature when in use.

3. Claims 1-2, 5, 7-8, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Krohm (USPN 2925616).

Krohm teaches a wiper which includes an elongate, flexible backbone (6). There is a force applying member (3) connected to the center backbone at two spaced apart points.

The spacing distance, S, between the points is between S_1=0.1*L and S_2=0.35*L where L is the length of the backbone. In the instant case, L & S are measured from the figures and it is determined that L is approximately 63.5 mm and S is 11.1 mm. After completing the calculations for the spacing distance, the spacing must be between 6.35 and 22.23 mm. Therefore, it is shown that the spacing distance of 11.1 mm falls within this range.

The ratio of the spacing distance between the points and the total length (R=S/L) must be between 0.1 and 0.35. The ratio for Krohm's wiper is 0.175 and therefore falls within this range.

The force applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. The backbone has a constant thickness and width along its length.

4. Claims 1-2, 5, 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Quinian et al. *"Quinian"* (USPN 3780395).

Quinian teaches a wiper, which includes an elongate, flexible curved backbone (21). There is a force applying member (38) connected to the center backbone at two spaced apart points (42).

The spacing distance, S, between the points is between S_1=0.1*L and S_2=0.35*L where L is the length of the backbone. In the instant case, L & S are measured from the figures and it is determined that L is approximately 190.5 mm and S is 31.75 mm. After completing the calculations for the spacing distance, the spacing must be between 19.05 and 66.68 mm. Therefore, it is shown that the spacing distance of 31.75 mm falls within this range.

The ratio of the spacing distance between the points and the total length (R=S/L) must be between 0.1 and 0.35. The ratio for Quinian's wiper is 0.1667 and therefore falls within this range.

The force applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. The backbone has a constant thickness and width along its length. The backbone also has a free form curvature as well as a compound curvature when in use.

5. Claims 1-5, 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Quinian et al. *"Quinian"* (USPN 33751754).

Quinian teaches a wiper, which includes an elongate, flexible curved backbone (16). There is a force applying member (13) connected to the center backbone at two spaced apart points (25).

The spacing distance, S, between the points is between S_1=0.1*L and S_2=0.35*L where L is the length of the backbone. In the instant case, L & S are measured from the figures and it is

determined that L is approximately 203.2 mm and S is 57.15 mm. After completing the calculations for the spacing distance, the spacing must be between 20.32 and 71.12 mm. Therefore, it is shown that the spacing distance of 57.15 mm falls within this range.

The ratio of the spacing distance between the points and the total length (R=S/L) must be between 0.1 and 0.35. The ratio for Quinian's wiper is 0.28 and therefore falls within this range.

The preferred spacing distance S_p between the spaced apart points is about $S_p=0.363*L-0.000146*L^2$. With Quinian's length of 203.2 mm a preferred spacing of 67.74 mm is calculated. The actual spacing is 57.15 and therefore there is only an error of approximately 10 mm between the actual and the preferred spacing. This is considered to be an acceptable amount of error.

The preferred ratio R_p is about $R_p=0.363-0.000146*L$. Given Quinian's length and spacing it is calculated that the preferred ratio is 0.33. That is very close to the actual ratio that was calculated above.

The force applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. The backbone has a constant thickness and width along its length. The backbone also has a free form curvature as well as a compound curvature when in use.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai ('326), Krohm ('616), Quinian ('395) and Quinian ('754) all in view of Swanpoel (USPN 5485650)

Arai, Krohm, and Quinian all teach the essential elements of the claimed invention however, they fail to teach a backbone with a varying width and thickness along its length. Swanpoel teaches a wiper with an elongated curved backbone with a backbone that tapers uniformly in both thickness and width in a straight line manner from its center to its tips (col. 3, line 36-37). It would have been obvious to have the backbone of Arai, Krohm, and Quinian's wipers vary in thickness and width along its length. Further, one of skill in the art would by routine experimentation find the optimum thickness and width for the backbone. It would have been obvious to one of skill in the art to make the thickness and width of the Arai, Krohm and Quinian vary to what is desired or required, including as claimed to optimize performance and life of the wiper.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai ('326), Krohm ('616), Quinian ('395) and Quinian ('754) all in view of Appel (USPN 3192551)

Arai, Krohm, and Quinian all teach the essential elements of the claimed invention however, they fail to teach a backbone with a varying width and thickness along its length. Appel teaches a wiper with an elongated curved backbone with a backbone that tapers uniformly in both thickness and width in a straight-line manner from its center to its tips (col. 3, line 36-37). It would have been obvious to have the backbone of Arai, Krohm, and Quinian's wipers vary in thickness and width along its length. Further, one of skill in the art would by routine experimentation find the optimum thickness and width for the backbone. It would have been obvious to one of skill in the art to make the thickness and width of the Arai, Krohm and Quinian

vary to what is desired or required, including as claimed to optimize performance and life of the wiper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L Balsis whose telephone number is 703-305-7275. The examiner can normally be reached on 7:30-5:00 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on 703-308-2920. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5665.

slb

Robert J. Warden, Sr.

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